

Norman H. Bangerter

State of Utah

DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER RIGHTS

Happy 1 636 West North Temple. Suite 220 Mortan Self Lake Gry, Utah 84116-3156 engineer 801-538-7240

June 2, 1988

RECEIVED

JUN - 6 1988

KENNECOTT EXPLORATION Salt Lake City, Utch

G. D. SCHURTZ

JUN 0 9 1988

OIL GAS & MINING

Kennecott Explorations (Australia) Ltd. 1515 Mineral Square SLC, UT 84112

Re: Regulating Reservoir Applications- 88R123, 88R124, 88R125, 88R126

Gentlemen:

We have approved your "Applications to Construct a Dam Impounding less than 20 acre-feet". Conditions on the approvals are as follows:

- Any storage of water in the reservoirs created is subject to all vested water rights in your area.
- 2. All design and construction activities undertaken shall be commensurate with state-of-the-art standards.
- 3. Notification of the inspector and contractor for the projects shall be submitted to this office prior to the beginning of any construction.
- 4. All inspector's journals and results of material testing performed during construction should be submitted to this office.

Copies of your approved applications are included for your future reference. If you have any questions or need further clarification, please feel free to contact me or Ed Feldt, of our Utah Lake-Jordan River area office.

Sincerely,

Richard B. Hall, P.E.

Directing Dam Safety Engineer

west & AU

RBH/cp

cc: Ed Feldt, Area Engineer

APPLICATION TO CONSTRUCT A DAM IMPOUNDING LESS THAN 20 ACRE-FEET

		STATE OF UTAH	Application No. 8861 = Received 4-14-87 Entered
	- Metah Cada Immotated	1953, to obtain the	ant to Section 73-5-12 e authority to build a less than 20 acre-feet
1. AP	PLICANT INFORMATION		·
	NAME Kenned	cott Explorations (A	ustralia) Ltd
	ADDRESS 1515	Mineral Square	
	CITY Salt Lake	City COUNTY	
	STATE Utah	ZIP	84112
2. PU	RPOSE OF DAM	•	
3. LO	SEDIMENTATION X OTHER (describe) CATION OF DAM QUARTER/QUARTER (i	.e. NESW) NWSW	SECTION 32 E & MERIDIAN SLBM
4. PR	OPOSED DAM		
	CREST LENGTH (leng CREST WIDTH (widt UPSTREAM SLOPE 4 DOWNSTREAM SLOPE 5 WATER SURFACE AREA RESERVOIR CAPACITY	th of top of dam) O VERTICAL ON O VERTICAL ON AT SPILLWAY CREST	40 FEET 260 FEET 25 FEET 60 HORIZONTAL 80 HORIZONTAL 1.8 ACRES 27 AC.FT.
5. P	PROPOSED OUTLET	earthrill	
	. היו אללום אר אמטיח	N/A INCHES LE CONCrete, steel, e LVE upstream, downstrea	EC.,) N/A
		N/A	

ь.	PROPOSED SPILLWAY
	CREST LENGTH (width of bottom of spillway) $\frac{N/A}{15}$ FEET TYPE (i.e. earth channel, pipe, etc.,)
	CONTROL / i a control diameter culvert
	CONTROL (i.e. gates, flashboards, etc.,)
	open drop inlet
7.	WATER RIGHTS
	DESCRIBE (See Instructions) N/A sediment pond only
8.	COMMENTS
	Owners name for structure is Impoundment P.
	27 acre-foot storage capacity is temporary and will be accomplished by adding a drop inlet to the permanent 48"
	<u>concrete culvert. The permanent storage capacity, controlled</u>
	by the concrete culvert is approximately 20 acre feet.
9.	PLANS
	Attach any plans sketches or diagrams which will clarify the
	information given on this application.
The	undersigned acknowledge they have read the instructions includ-
ed 1	with this application, and are aware no construction is to begin
unt.	il this application has been approved by the Utah State Engineer
	4/4/88 Theolo Dehut
	Date Signature of Applicant
	bignature of Appingant
	Water Rights in Order By JD Date 6/1/88
	Area Engineer's Hazard Rating
	Reviewed by Dam Safety By Lt Date 1/2/86
	•
)a+e	e of Approval Winc 2.1980 5 All SHU
	O A RUULUYEL ////// /.///// /// /// /// //////////

Date of Approval

Robert L. Morgan, P.E.
State Engineer

APPLICATION TO CONSTRUCT A DAM IMPOUNDING LESS THAN 20 ACRE-FEET

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L. API	PLICANT IN	FORMATION				
	NAME	Kennecott	Explorati	ons (austra	alia) Ltd.	
	ADDRESS	1515 Miner				
	CITY	Salt Lake		COUNTY C	F DAM Salt	Lake
	STATE	Utah		ZIP	8411	2.
				• •		
. PUE	RPOSE OF D	AM				
	STOCK PO	ND 1	REGULATING	RES.	DIVERSION	DAM
	IRRIGATI	-	DEBRIS BAS		FLOOD CON	TROL
	SEDIMENT		TAILINGS B		RECREATIO	N
r (7) - 13		describe)				
. LOC	CATION OF	DAM	7 p. 45 P.			
					CROMTO	N 22
		QUARTER (i			SECTION SECTION	
	TOWNSHIP	2S	RANGE2	W BASE	a MERIDIA	N SLBM
-						
. PRO	DPOSED DAM					
. PRO		HT (vert	ical dista	ance)	45	FEET
. PRO	DAM HEIG		ical dista		<u>45</u> 500	FEET FEET
. PRO	DAM HEIG	NGTH (leng	th of top	of dam)	45 500 25	
. PRO	DAM HEIG CREST LE CREST WI	NGTH (length DTH (width	th of top	of dam) _	500	FEET
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM	NGTH (length) DTH (width) SLOPE	th of top h of top of 15 VER	of dam) _ of dam) _ RTICAL ON _	500 25 80	FEET FEET
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE	NGTH (length of the length of	th of top h of top of 15 VEI 70 VEI	of dam) _ of dam) _ RTICAL ON _ RTICAL ON _	500 25 80 120	FEET FEET HORIZONTAL
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU	NGTH (length of the length of	th of top h of top of 15 VEI 70 VEI AT SPILLWA	of dam) = of dam) = of dam) = of dam) = of dam of d	500 25 80 120 2.1	FEET FEET HORIZONTAL HORIZONTAL ACRES
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI	NGTH (length of the length of	th of top h of top of 15 VEI 70 VEI AT SPILLWA	of dam) = of dam) = of dam) = of dam) = of dam of d	500 25 80 120 2.1 20	FEET FEET HORIZONTAL HORIZONTAL
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI	NGTH (length of the length of	th of top h of top of 15 VER 70 VER AT SPILLWA AT SPILLWA earthfill	of dam) = of dam) = of dam) = of dam) = of dam of d	500 25 80 120 2.1 20	FEET FEET HORIZONTAL HORIZONTAL ACRES
. PRO	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI	NGTH (length of the length of	th of top h of top of 15 VER 70 VER AT SPILLWA AT SPILLWA earthfill	of dam) of dam) RTICAL ON RTICAL ON AY CREST AY CREST , concrete,	500 25 80 120 2.1 20	FEET FEET HORIZONTAL HORIZONTAL ACRES
	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI	NGTH (length of the length of	th of top h of top of 15 VER 70 VER AT SPILLWA AT SPILLWA earthfill	of dam) of dam) RTICAL ON RTICAL ON AY CREST AY CREST , concrete,	500 25 80 120 2.1 20	FEET FEET HORIZONTAL HORIZONTAL ACRES
	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI TYPE OF	NGTH (length of the length of	th of top h of top of 15 VER 70 VER AT SPILLWA AT SPILLWA earthfill,	of dam) of dam of da	500 25 80 120 2.1 20 etc.,)	FEET FEET HORIZONTAL HORIZONTAL ACRES AC.FT.
	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI TYPE OF	NGTH (length of the length of	th of top h of top of 15 VEN 70 VEN AT SPILLWA earthfill ear	of dam) of dam of dam) of dam o	500 25 80 120 2.1 20 etc.,)	FEET FEET HORIZONTAL HORIZONTAL ACRES AC.FT.
	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI TYPE OF	NGTH (length of the length of	th of top h of top of 15 VEN 70 VEN AT SPILLWA earthfill ear N/A INC Concrete	of dam) of dam of da	500 25 80 120 2.1 20 etc.,)	FEET FEET HORIZONTAL HORIZONTAL ACRES AC.FT.
	DAM HEIG CREST LE CREST WI UPSTREAM DOWNSTRE WATER SU RESERVOI TYPE OF ROPOSED OU INSIDE D TYPE OF	NGTH (length of the length of	th of top h of top of 15 VEN 70 VEN AT SPILLWA earthfill ear N/A Concrete VE	of dam) of dam of da	500 25 80 120 2.1 20 etc.,)	FEET FEET HORIZONTAL HORIZONTAL ACRES AC.FT.

	CREST LENGTH (width of bottom of spillway) N/A DEPTH (from bottom of spillway to top of dam) 15		
	TYPE (1.e. earth channel, pipe, etc.,)		
	CONTROL (i.e. gates, flashboards, etc.,)		
•	none, open culvert		
W	ATER RIGHTS		
	DESCRIBE (See Instructions) N/A Sediment pond only		
	59-3912- Darton Spr 1.10- Luck pard sweet: Kenner		
	- piped got tie with of impound ment of		
C	omments		
	Ormoria nama Sauratur II. ua		
	Owners name for structure is: "Impoundment Q".		
P.	Attach any plans sketches or diagrams which will clarify information given on this application.		
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Robert L. Morgan, P.E. State Engineer

APPLICATION TO CONSTRUCT A DAM IMPOUNDING LESS THAN 20 ACRE-PEET

m which will	create a reser	voir impounding 1	authority to build ess than 20 acre-fe	et
APPLICANT I	INFORMATION			
NAME	Kennecott Ex	plorations (Austr	alia) Ltd.	
ADDRESS		Square	A THE RESERVE AND A PARTY OF THE PARTY OF TH	
CITY _	Salt Lake Ci			
STATE	Utah	ZIP	84112	•
DEDDOCE OF	DIK			
PURPOSE OF	DAM		2000 - San	
STOCK I	OND PEG	ULATING RES.	DIVERSION DAM	
IRRIGA		RIS BASIN	FLOOD CONTROL	
		LINGS POND	RECREATION	1
	(describe)			13:1
LOCATION OF				
LOCATION OF			SECTION 32 SLBM	
LOCATION OF	P DAM R/QUARTER (i.e. IP 2S RAN			
QUARTER TOWNSHI	P DAM R/QUARTER (i.e. IP 2S RAN	IGE 2W BASE	E & MERIDIAN SLBM	EET
QUARTED TOWNSHIP PROPOSED DAM HE	P DAM R/QUARTER (i.e. IP 2S RAN AM IGHT (vertica	GE 2W BASE	25 PI	EET
QUARTED TOWNSHIP PROPOSED DAM HEIDERST	P DAM R/QUARTER (i.e. IP 2S RAN AM IGHT (vertica LENGTH (length	IGE 2W BASE	25 P1 450 P1 25 P1	EET EET
DAM HE:	P DAM R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width o	IGE 2W BASE	25 F1 450 F1 50 HORIZON	EET EET TAL
DAM HE: CREST I UPSTREE	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25	d distance) of top of dam) of top of dam)	25 P1 450 P1 25 P1	EET EET TAL
DAM HES CREST IN UPSTREAM OF TOWNSTIPMENT OF THE PROPOSED DATE OF THE PR	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30	distance) of top of dam) VERTICAL ON VERTICAL ON	25 F1 450 F1 25 F1 50 HORIZON 60 HORIZON 1.8 AC	EET TAL TAL RES
DAM HE: CREST I CREST I UPSTREE	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT	distance) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST	25 F1 430 F1 25 F1 50 HORIZON	EET TAL TAL RES
DAM HE: CREST I CREST I UPSTREE DOWNSTI WATER S RESERVE	R/QUARTER (i.e. IP 2S RAN IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT	distance) of top of dam) VERTICAL ON SPILLWAY CREST SPILLWAY CREST	25 P1 450 P1 25 P1 50 HORIZON 60 HORIZON 1.8 AC1	EET TAL TAL RES
DAM HE: CREST I CREST I UPSTREE DOWNSTI WATER S RESERVE	R/QUARTER (i.e. IP 2S RAN IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT	distance) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST	25 P1 450 P1 25 P1 50 HORIZON 60 HORIZON 1.8 AC1	EET TAL TAL RES
DAM HEI CREST IN CREST	R/QUARTER (i.e. IP 2S RAN IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT	distance) of top of dam) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST SPILLWAY CREST STANDARD	25 P1 450 P1 25 P1 50 HORIZON 60 HORIZON 1.8 AC1	EET TAL TAL RES
DAM HEST OWNSTRANSPORT	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT F DAM (i.e. ear	distance) of top of dam) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST SPILLWAY CREST STANDARD	25 P1 450 P1 25 P1 50 HORIZON 60 HORIZON 1.8 AC1	EET TAL TAL RES
DAM HEI CREST IN CREST	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT F DAM (i.e. ear	distance) of top of dam) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST SPILLWAY CREST STANDARD	25 P1 450 P1 25 P1 50 HORIZON 60 HORIZON 1.8 AC1	EET TAL TAL RES
DAM HEST CREST SUPSTRESS WATER SESERVE TYPE OF THE PROPOSED OF	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT F DAM (i.e. ear	distance) of top of dam) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST SPILLWAY CREST thfill, concrete, earthfill	25 PI 430 FI 25 PI 50 HORIZON 60 HORIZON 1.8 ACI 19 AC.1	EET TAL TAL RES
DAM HE: CREST I CREST I UPSTREE DOWNSTI WATER S RESERVE TYPE OF	R/QUARTER (i.e. IP 2S RAN AM IGHT (vertical LENGTH (length WIDTH (width of AM SLOPE 25 REAM SLOPE 30 SURFACE AREA AT OIR CAPACITY AT F DAM (i.e. ear	distance) of top of dam) of top of dam) VERTICAL ON VERTICAL ON SPILLWAY CREST SPILLWAY CREST thfill, concrete, earthfill INCHES LEN oncrete, steel, et	25 PI 430 FI 25 PI 50 HORIZON 60 HORIZON 1.8 ACI 19 AC.1	EET TAL TAL RES

	CREST LENGTE (width of bottom of spillway) DEPTH (from bottom of spillway to top of dam) TYPE (i.e. earth channel, pipe, etc.,)
	CONTROL (i.e. gates, flashboards, etc.,) None
7.	WATER RIGHTS
	DESCRIBE (See Instructions) N/A Sediment pond only
	COMMENTS
	Owner's name for structure is: "Impoundment R".
•	
	information given on this application.
Q W.	undersigned acknowledge they have read the instructions included the construction is to begin
a wi	undersigned acknowledge they have read the instructions included the construction is to begin
a wi	indersigned acknowledge they have read the instructions included the construction is to begin this application has been approved by the Utah State Engineer Land Dehate Engineer
a wi	Water Rights in Order Area Engineer's Hazard Rating Reviewed by Dame Acknowledge they have read the instructions included the state included the state and the state included the state and the state included the state incl
C W	Water Rights in Order Area Engineer's Hazard Rating Reviewed by Dame Acknowledge they have read the instructions included the state included the state and the state included the state and the state included the state incl
ea wi	Water Rights in Order Area Engineer's Hazard Rating Reviewed by Dame Acknowledge they have read the instructions included the state included the state and the state included the state and the state included the state incl
inti]	Water Rights in Order Area Engineer's Hazard Rating Reviewed by Dame Acknowledge they have read the instructions included the state included the state and the state included the state and the state included the state incl

APPLICATION TO CONSTRUCT A DAM IMPOUNDING LESS THAN 20 ACRE-FEET

	STATE OF UTAH	Application No. 88 1/2 Received 41/-88
of th	following application is submitted, pursu he Utah Code Annotated 1953, to obtain to which will create a reservoir impounding	he authority to build a
1. A	PPLICANT INFORMATION	
	NAME Kennecott Explorations (Aust	ralia) Ltd.
	ADDRESS 1513 Mineral Square	
	CITY Salt Lake City COUNTY	OF DAM Salt Lake
•	STATE Utah ZIP	84112
2. P	URPOSE OF DAM	
3. T.C	IRRIGATION DEBRIS BASIN	DIVERSION DAM FLOOD CONTROL RECREATION
J	QUARTER/QUARTER (i.e. NESW) NENE TOWNSHIP 3S RANGE 2W BAS	SECTION 6 SE & MERIDIAN SLEM
4. PF	ROPOSED DAM	
	DAM HEIGHT (vertical distance)	45 FEET
	CREST LENGTH (length of top of dam)	450 FEET
	CREST WIDTH (width of top of dam)	25 FEET
	UPSTREAM SLOPE 45 VERTICAL ON	70 HORIZONTAL
	DOWNSTREAM SLOPE 80 VERTICAL ON	110 HORIZONTAL
	WATER SURFACE AREA AT SPILLWAY CREST	1.4 ACRES
	RESERVOIR CAPACITY AT SPILLWAY CREST TYPE OF DAM (i.e. earthfill, concrete	10 AC.FT.
	earthfill	
 5. P	PROPOSED OUTLET	
	INSIDE DIAMETER N/A INCHES LI	ENGTH N/A FEET
	TYPE OF PIPE (i.e. concrete, steel, e	
	TYPE OF GATE OR VALVE N/A	
	LOCATION OF GATE (upstream, downstream	m, center, etc.,)
	N/A	

6.	PROPOSED SPILLWAY CREST LENGTH (width of bottom of spillway) DEPTH (from bottom of spillway to top of dam) TYPE (i.e. earth channel, pipe, etc.,)
	48-inch diameter concrete gulyart
	CONTROL (i.e. gates, flashboards, etc.,) None
_	
7.	WATER RIGHTS
	DESCRIBE (See Instructions) N/A Sediment pond only
8.	COMMENTS
	Owner's name for structure is: "Impoundment S".
9. :	Plans
The 1	undersigned acknowledge they have read the instructions includ-
ea w	ith this application, and are aware no construction is to begin this application has been approved by the Utah State Engineer
	414188 Peles Debut
	Date Signature of Applicat
	/ Dignature of Applicant
	Water Rights in Order By JU Date 6/1/88 Area Engineer's Hazard Rating 6/1/88 Reviewed by Dam Safety By 6/1 Date 6/1/88
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pate	of Approval Jun 2, 1981 Dun Diffy
	Robert L. Morgan, P.E. State Engineer